Defense Nuclear Waste Disposal

Proposed Appropriation Language

For nuclear waste disposal activities to carry out the purposes of Public Law 97-425, as amended, including the acquisition of real property or facility construction or expansion, [$189,000,000] *$112,000,000* to remain available until expended. *Further, for the foregoing purposes, $190,000,000, to become available October 1, 2000 to remain available until expended.*

Explanation of Change

The Budget requests that an additional $39 million be provided from $85 million in unobligated balances remaining from the FY 1996 Defense Nuclear Waste Disposal Appropriation (Public Law 104-46) and transferred to the Nuclear Waste Disposal account in FY 2000.

Defense Nuclear Waste Disposal

Program Mission

The goal of the Defense Nuclear Waste Disposal Program is to dispose of high-level waste generated from atomic energy defense activities. The primary focus of this program is to find a long term geological repository for Defense Nuclear Waste. This effort supports the Yucca Mountain Site Characterization Project and the Waste Acceptance Storage and Transportation (WAST) Project, which are described in detail in the Nuclear Waste Fund Budget Request.

Funding Profile

(dollars in thousands)

	FY 1998 Current Appropriation	FY 1999 Current Appropriation	FY 2000 Budget Request	FY 2001 Budget Request
Defense Nuclear Waste Disposal				
Yucca Mountain Site Characterization……	190,000	189,000	112,000	190,000
Total, Defense Nuclear Waste Disposal……..	190,000	189,000	112,000	190,000

Public Law Authorization:

P.L. 97-425, "Nuclear Waste Policy Act" (1982);

P.L. 100-203, "Nuclear Waste Policy Amendments

Funding by Site

(dollars in thousands)

	FY 1998	FY 1999	FY 2000	$ Change	% Change
Chicago Operations Office					
Argonne National Laboratory	2,076	2,558	2,919	361	14.1%
Oakland Operations Office					
Lawrence Berkeley Laboratory	8,781	6,648	5,066	-1,582	-23.8%
Lawrence Livermore National Laboratory	18,766	22,634	21,857	-777	-3.4%
Total, Oakland Operations Office	27,547	29,282	26,923	-2,359	-8.1%
Albuquerque Operations Office					
Sandia National Laboratory	11,306	13,546	11,172	-2,374	-17.5%
Los Alamos National Laboratory	13,166	11,536	10,204	-1,332	-11.5%
Total, Albuquerque Operations Office	24,472	25,082	21,376	-3,706	-14.8%
Nevada Operations Office[a]	121,814	118,790	48,217	-70,573	-59.4%
Nevada Test Site	6,452	4,690	4,914	224	4.8%
Nevada (Yucca Mountain Project Office)	6,100	6,580	6,580	0	0.0%
Total, Nevada Operations Office	134,366	130,060	59,711	-70,349	-54.1%
Oak Ridge Operations Office					
Oak Ridge National Laboratory	295	754	292	-462	-61.3%
Richland Operations Office					
Pacific Northwest Laboratory	1,244	1,264	779	-485	-38.4%
Total, Program	190,000	189,000	112,000	-77,000	-40.7%

[a] Includes Financial Assistance to the State of Nevada, and Affected Units of Local Government and includes funding for contracts administered in Nevada (i.e. Management and Operating Contractor, USGS, National Academy of Science, Universities, etc.)

Site Description

Argonne National Laboratory

In support of Design and Engineering, Argonne National Laboratory conducts waste form testing. The laboratory is also the custodian for new spent fuel approved test material.

Lawrence Berkeley Laboratory

In support of Core Science, Lawrence Berkeley National Laboratory conducts Unsaturated Zone flow and transport modeling, thermal hydrologic modeling activities, geophysics testing, and supports Drift Scale testing. LBNL also performs the seepage tests in the exploratory studies facility alcoves and niches. LBNL supports the abstraction activities needed to conduct the Total System Performance Assessment in support of Site Recommendation and Licensing Application.

Lawrence Livermore National Laboratory

In support of Core Science, Lawrence Livermore National Laboratory conducts experiments and modeling activities needed for the repository design and to predict responses of the engineered and natural barrier systems to the heat generated by radioactive waste. The experiments include the Single Heater and Drift Scale tests in the ESF, the proposed heater tests in the Cross drift, and the Large Block test on the Fran Ridge at the site. In support of Design and Engineering, LLNL conducts testing and modeling of the waste package environment, waste package materials and waste forms. LLNL also supports the abstraction activities needed to conduct Total System Performance Assessment in support of Site Recommendation and Licensing Application.

Sandia National Laboratory

In support of Core Science, Sandia National Laboratories conducts in-situ monitoring in the Exploratory Studies Facility and in the East-West drift, and performance confirmation testing. The laboratory conducts geoengineering and rock mechanics studies, and backfill analyses in support of Design and Engineering. The laboratory also supports Suitability/Licensing and Performance Assessment with performance assessment modeling.

Los Alamos National Laboratory

In support of Core Science, Los Alamos National Laboratory conducts geochemistry, mineralogy, and colloid transport studies. LANL conducts laboratory – and field-scale transport tests, including the Busted Butte Transport Test, and develops radionuclide transport models for the unsaturated and saturated zone groundwaters at the site. LANL corroborates with USGS on isotopic and groundwater chemistry investigations needed for transport models. In support of Operations/Construction, the laboratory coordinates testing at the Yucca Mountain site, including testing in the ESF. LANL also supports the abstraction activities needed to conduct Total System Performance Assessment in support of Site Recommendation and Licensing Application.

Nevada Test Site

In support of Core Science and Operations/ Construction at the Yucca Mountain Site, the Nevada Test Site, through Bechtel Nevada, provides NTS common site support such as: logistics, fire protection, security, emergency medical services, roads/grounds maintenance, environmental operations, vehicle/construction equipment maintenance, facility maintenance, bus transportation, janitorial and refuse services, and power usage.

Nevada Operations Office

In support of the Yucca Mountain Project and the OCRWM Program Direction, the Nevada Operations Office administers disbursement of External Oversight and PETT funds to affected units of government, and also administers contracts/agreements with: TRW Environmental Safety Systems as the OCRWM Management & Operating (M&O) contractor, the United States Geological Survey, the National Academy of Sciences, the University and Community College System of Nevada, Atomic Energy Canada Limited, Jason Technologies Corporation, Alpha Services , Science Applications International Corporation, Bechtel Nevada , and Wackenhut Services, Inc.

Yucca Mountain Project Office in Nevada

The Yucca Mountain Project Office in Nevada has the primary responsibility for the characterization of the Yucca Mountain site, and if the site is suitable, for preparing and submitting a license application to the Nuclear Regulatory Commission for construction of the repository. As the future owner and licensee of the repository, DOE develops and implements policies and strategies for the work to be completed and oversees the management and operating contractor and the United States Geological Society in performing this work. YMSCO manages the contracts for the management and operating contractor and the support services contractors for work at Yucca Mountain.

Site characterization and license preparation activities include developing and conducting surface-based and underground data collection and testing; design of the repository and waste package subsystems; developing and implementing environmental, safety and health policies; preparing the environmental impact statement; interacting with oversight and regulatory groups; and providing the necessary management and site infrastructure to support these activities.

Oak Ridge National Laboratory

In support of Design and Engineering, the Oak Ridge National laboratory provides support in analyzing commercial reactor criticality data, radiochemical assays and uncanistered fuel design. The laboratory also provides technical support for the disposal criticality topical report, thermal/neutronics model and criticality analysis process report.

Pacific Northwest Laboratory

In support of Design and Engineering, the Pacific Northwest Laboratory provides waste form testing support.